



Natural Carbon Solutions Innovation Challenge
Program Opportunity Notice (PON) 5180
Round 1
Up to \$18.15M Available

NYSERDA reserves the right to extend and/or add funding to the Solicitation should other program funding sources become available.

Proposals Due: **November 29, 2022** by **3:00 PM EST**

Through this solicitation, New York State Energy Research and Development Authority (NYSERDA) anticipates issuing one or more rounds to catalyze novel approaches to significantly increase the scale of negative emissions, carbon sequestration, reduce waste-related methane, and advance New York's clean energy goals. Projects can involve enabling technologies, novel business models and other scalable strategies. Successful projects will be able to self-sustain and scale beyond the period funded by NYSERDA, catalyze additional private investment if needed, and in some cases, may inform changes to policy such as for incentives and procurement guidelines. Successful proposals will describe the maturity of the approach, and may be an available commercial product, service, pre-commercial technology, or a business model that has customers, or has not been tested and is conceptual.

Challenge Areas (Round 1)		
Research, development, and/or demonstration of:		
1. Buildings: materials, designs, and strategies for "low to carbon negative" envelope retrofits and/or new construction		
2. Enabling products, services, and strategies to reduce waste methane, increase carbon sequestration, optimize use of land, energy, natural resources		
3. Advancements in measurement, monitoring, reporting and verification (MMRV) of GHG emissions and Co-Benefits		
Challenge Area(s)	Anticipated Maximum NYSERDA award per project	Proposer cost share
1 and 2	\$2,500,000	See Section III below
3	\$1,500,000	20%

Challenge Areas 1 and 2 may begin from a feasibility stage (pre-commercial), demonstration, or an evaluation of the scalability of a mature technology, service, or business model in the New York State market. Submissions must demonstrate significant improvements over the current state of practice, reduce greenhouse gas (GHG) emissions, contain benefits for rate payers, disadvantaged communities, and other co-benefits, such as resilience and pollution reduction.

Challenge Area 3 seeks to improve and standardize GHG measurement, monitoring, reporting, and verification (MMRV) for key decarbonization pathways, relevant to Challenge Areas 1 and 2

and more broadly. Improved data, transparency and broadly accessible analysis tools can enable New York State to prioritize decarbonization pathways, creating high impact incentives and providing a rigorous standard for procuring products and services based on net GHG emissions and other co-benefits. In addition, such tools are applicable for federal and private initiatives seeking to improve GHG reporting standards. Challenge Area 3 should already have achieved validation, demonstration, or be in the market, be applicable to Challenge Areas 1 and 2, propose a plan to increase scale, access, performance, and address other proposal requirements (See Section II and Attachment A3).

Future rounds of this program may have one or more challenges areas with different topics, proposal requirements, and funding caps. As future rounds are announced, the revised solicitation will be posted at <https://www.nyserda.ny.gov/Funding-Opportunities/Current-Funding-Opportunities>

Proposal Submission – Online submission is preferable. Proposers may submit Word, Excel, or PDF files (file formats include csv, doc, docx, gif, jpeg, jpg, pdf, png, ppt, pptx, pps, ppsx, tif, txt, xls, xlsx, and zip). Individual files should be 100MB or less in file size. Proposal PDFs should be searchable and should be created by direct conversion from MS Word, or other conversion utility. Files should not be scanned. For ease of identification, all electronic files must be named using the proposer's entity name in the title of the document. NYSERDA will also accept proposals by mail or hand-delivery if online submission is not possible. For detailed instructions on how to submit a proposal (online or paper submission), click the link "[Application Instructions and Portal Training Guide](#) [PDF]" located in the "[Current Opportunities](#)" section of NYSERDA's website.

Questions? Please see the list of Designated Contacts below.

- No communication intended to influence this procurement is permitted except by contacting the Designated Contact. Ziggy Majumdar (**Designated Contact**), (518) 862-1090 ext. 3439 or by e-mail NatCarbon@nyserda.ny.gov.
- If you have contractual questions concerning this solicitation, contact Venice Forbes (Designated Contact), (518) 862-1090 ext. 3507 or by email venicesolicitations@nyserda.ny.gov.

Contacting anyone other than the Designated Contacts (either directly by the proposer or indirectly through a lobbyist or other person acting on the proposer's behalf) in an attempt to influence the procurement: (1) may result in a proposer being deemed a non-responsible offerer, and (2) may result in the proposer not being awarded a contract.

*** All proposals must be received by 3:00 p.m. Eastern Standard Time on the date noted above. Late, faxed, or emailed proposals will not be accepted.** Incomplete proposals may be subject to disqualification. It is the proposer's responsibility to ensure that all pages have been included in the proposal. Please note for online submission, there are required questions that you must answer in addition to uploading attachments and you should allot at least 60 minutes to enter/submit proposals. The online proposal system closes promptly at 3 p.m. Eastern Standard Time, files in process or attempted edits or submission after 3 p.m. Eastern Time on the date above, will not be accepted.

I. INTRODUCTION

New York State's Climate Leadership and Community Protection Act (Climate Act) sets a net zero greenhouse gas (GHG) emissions goal through a combination of gross emission reductions, energy conservation, and negative emissions, or atmospheric carbon dioxide removal.¹ The natural and working lands sectors, primarily agriculture and forestry, are anticipated to play a substantial role in increasing carbon sequestration, while these and other sectors can play a significant role to reduce methane emissions from organic waste. Modeling performed as part of New York's Climate Scoping Plan suggests that new mechanisms and enabling strategies are needed to achieve the desired scale of transformation². Improvements in yield and production efficiency of crops, forest products, utilization of organic waste with optimal land management can enable a regenerative and circular economy that supports resilience, health, and the environment. There are numerous opportunities to substitute high carbon intensity products and energy sources with low emissions alternatives, which can help reduce emissions in New York State and globally. The potential to locally source feedstocks and utilize them in high value products offers the potential for lowered costs, a more robust local business ecosystem, simpler supply chains and potential for more jobs within New York State.

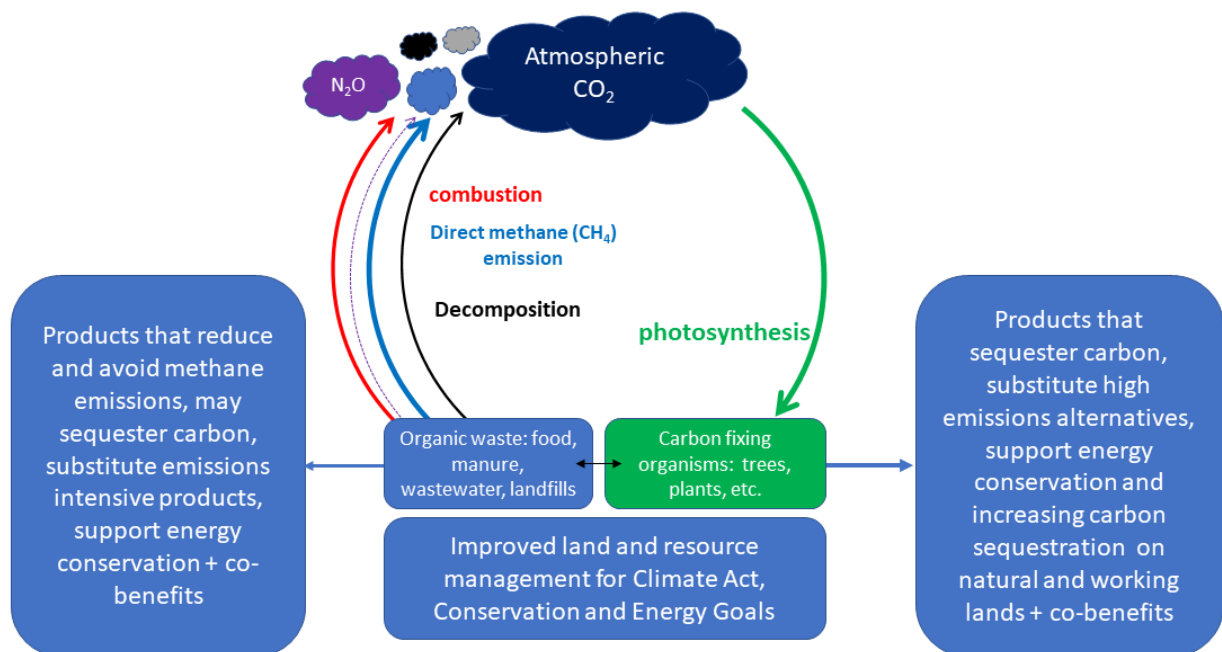


Figure 1. Schematic of GHG cycle and relevant interventions.

¹ For example, the 2050 goal for a net zero emissions economy involves at least 85% reduction in gross emissions with the remaining 15% via “negative emissions”, The Draft Scoping Plan explains the overall strategy for implementing a net zero economy and can be found at: <https://climate.ny.gov/Our-Climate-Act/Draft-Scoping-Plan>. The supporting Integration Analysis contains a summary of the calculations and assumptions for the GHG reduction pathways, and can be found in Appendix G and the Annex files in the link above in this footnote

² See DEC's GHG inventory available here: <https://www.dec.ny.gov/energy/99223.html>, indicating 15% ~ 60 MMt CO₂e/yr. It is expected that natural and working lands, mainly forests can, with ambitious implementation, reach near 40 MMt CO₂e/yr, needing 20 MMt/yr additional CO₂ removals unless gross emissions are reduced more than 85%. Thus, an increase of up to ~ 36 MMt/yr in removals may be needed from all possible solutions (Integration Analysis, Appendix G, Scoping Plan). Economic considerations for implementing certain known practices are detailed in: [Economic Impacts of Investing in Climate Mitigation in New York Forests and Agriculture](#)

Table 1. Pathways relevant for New York’s Climate Act goals and this solicitation

Pathway	GHG Reduction Potential (CO2e)	Co-Benefits
Building energy savings from improved envelopes	33 MMt/yr (heating, cooling)	<ul style="list-style-type: none">• Likely > 125 MMt CO2e³ building embodied carbon• Reduced pollution• Increased resilience• Lower energy costs• Economic advantage in low carbon products
Waste methane reduction	57 MMt/yr ⁴	
Carbon Sequestration + Other Negative Emissions	An increase of 36 MMt/yr CO2 removal may be needed by 2050	
CO2e = Carbon Dioxide (CO2) equivalent units; Mt = Metric Tons (1000 kg); MMt = Million Metric Tons		

A schematic GHG cycle in Figure 1 depicts decarbonization pathways relevant to this solicitation. Table 1 contains estimates of GHG reduction needs for relevant pathways to achieve a net zero emissions economy, as summarized in New York State’s Draft Climate Action Council Scoping Plan⁵ and the supporting Integration Analysis⁶.

Given the ambitious goals of the Climate Act, we **recommended teaming with others that complement your capabilities**. This may be especially helpful for teams outside New York State, who can benefit from the knowledge of local policies, businesses, research, and community ecosystems. **A webinar is being scheduled and a teaming list is being provided; updates will be posted to the funding opportunities website.** Proposers who wish to be included on the public teaming list should submit the requested information to the Designated Contact to have their information added so others may contact them (*Name, organization, email address, brief description of your capability, description of collaborations/ team members sought*). Note, this is not required, it is purely optional for the purpose of facilitating teaming and bringing awareness to entities interested in collaboration in these topic areas. Presence on the teaming list does not constitute endorsement by NYSERDA – interested parties are strongly cautioned to perform their own due diligence.

Eligible Proposers

³ A rough estimate of the embodied carbon impact from a 6M building retrofit campaign and 1M in new construction, as projected in New York’s Climate Scoping Plan (see Attachment A1 and references therein). This number is noted as a co-benefit, when comparing a net zero embodied carbon solution to business as usual. The embodied carbon from building materials is estimated to be 1/3 of total building life cycle emissions globally (see Attachment A1 and references therein). For 6M buildings, this estimate uses published embodied carbon values for XPS insulation vs. net zero and an estimate of total wall volume, giving 50 MMt CO₂e in net emissions. Then we add projections for 1M new buildings by 2050, assuming ~ 0.4 Mt CO₂e per meter squared floor area. If one assumes the average building 2,000 ft² = 185 m², this gives about 74 Mt per building and with 1M buildings, 74 MMt. Thus 50MMt + 74 MMt = 124 MMt. These calculations are not meant to be rigorous, but demonstrate the idea that emissions associated with building products are an important consideration in all climate goals.

⁴ Substituting waste derived products and energy for incumbent products can offer additional reductions and is considered part of a low-carbon fuels strategy

⁵ <https://climate.ny.gov/Our-Climate-Act/Draft-Scoping-Plan>

⁶ See Appendix G, Integration Analysis and sub-sections at the link Scoping Plan (prior footnote)

Eligible proposers include companies, manufacturers, research organizations, universities, farmers, individuals, local governments, corporate strategic partners, investors, end-users, and community representatives

State agencies are not eligible for funding under this PON.

Team members may include anyone relevant to the project, such as companies, manufacturers, research organizations, universities, government agencies, farmers, individuals, local governments, corporate strategic partners, investors, end-users, and community representatives.

II. INNOVATION CHALLENGE AREAS

Each Challenge area has different requirements and funding caps. **Each Attachment provides detailed information specific to the Challenge Area**, such as problem, status quo, barriers, opportunities, types of projects encouraged, proposal and statement of work (SOW) requirements. Section III summarizes anticipated budget and schedule.

Proposals must identify only one Challenge Area the proposal aims to address. *Teams can submit multiple proposals across all areas, but each proposal must address only one Challenge Area.* Proposals will be reviewed to determine if they meet all Proposal Requirements and fit within the selected Challenge Area. NYSERDA reserves the right to move a proposal that does not fit within the selected Challenge Area and assign it to a different Challenge Area.

- **Challenge Area 1** - Buildings: materials, designs, and strategies for “low to carbon negative” envelope retrofits and/or new construction
 - **Attachment A1**
- **Challenge Area 2** – Enabling products, services, and strategies to reduce waste methane, increase carbon sequestration, optimize use of land, energy, natural resources
 - **Attachment A2**
- **Challenge Area 3** - Advancements in measurement, monitoring, reporting and verification (MMRV) of GHG emissions and Co-Benefits
 - **Attachment A3**

The following topics are not eligible for funding through Round 1 of this solicitation:

1. Biofuels derived from new crop systems with land dedicated solely for energy production
2. Direct Air Capture technology
3. New deployments of energy systems using combustion to generate electricity only (as opposed to transition of legacy systems toward net zero or net negative emissions through use of co-products alongside energy production – which may be eligible)
4. Implementing existing practices, or incremental advances over existing practices already covered by State and federal programs such as: forest management, cover crops, reduced tillage, cover and flare for manure, agroforestry, riparian buffers, silvopasture
5. Enhanced weathering CO2 sequestration
6. Enteric methane emissions from livestock
7. Methane from natural gas infrastructure, such as transmission and distribution pipelines
8. Bulk purchasing or incentives of available products currently in the marketplace.

Proposers should contact the Designated Contacts for questions about eligibility.

III. FUNDING AND SCHEDULE

Anticipated funding caps, certain required terms, and project duration by challenge area are summarized below. Actual awarded amounts can vary from the proposed amount after contract negotiation. NYSERDA reserves the right to fund all or none of the submitted proposals, award specific phases or portions of the proposed plan. Where no challenge area is specified, the bulleted clauses below apply to all challenge areas. Apply the guidance in this Section to your proposal submission, further instructions for completing proposals are in Section IV and Section II.⁷

Anticipated period of performance, required Go/No-Go, and funding caps

- A project is expected to begin within nine months of the proposal due date. No project schedule should exceed a total of 36 months, except to indicate commercialization activities beyond those of the proposed project
- Any project requesting NYSERDA funding greater than \$250,000, will require a Go/No-Go milestone and evaluation thereof to continue and receive funds above \$250,000.
- Winning proposers will be expected to conduct review meetings for all Go/No-Go Decisions and completion of phases.
- Anticipated funding cap for NYSERDA's portion of the project cost
 - Challenge Areas 1 and 2: \$2,500,000
 - Challenge Area 3: \$1,500,000 with 20% Proposer cost share preferred
 - Phased funding requirements apply to Challenge Areas 1 and 2 (below)

Phased funding requirements for Challenge Areas 1 and 2

In order to maximize portfolio success, to further support approaches with potential for a significant scale of impact relative to Climate Act goals, and provide innovative proposers an opportunity to test ambitious new approaches, NYSERDA is employing the following phased funding structure for Challenge Areas 1 and 2. Contracts resulting from selected proposals will include a phased funding mechanism with rigorous performance milestones that must be met to access funding for follow-on phases. See Section II and Attachments A1 and A2 for Phase 1 Go/No-Go performance criteria.

Phase 1

- 6-12 months duration
- \$50,000 - \$250,000 NYSERDA cost
- Preferred 20% Minimum Proposer cost share; proposals meeting or exceeding this threshold will receive scoring preference.
- Can begin at any stage of technological or product maturity – for mature products that seek to demonstrate benefits, scalability, policy compatibility, Phase 1 may be shorter, focusing primarily on key performance indicators required for Go/No-Go, whereas projects that seek to mature technology, may be longer.
- Feasibility evaluation of a technology may continue beyond phase 1, if key performance indicators can be met (see Technology Readiness Level (TRL) table below, to be indicated in Proposal Narrative)

⁷ Funds for projects with statewide benefit that are funded through the Regional Greenhouse Gas Initiative (RGGI) Operating Plan will be allocated each fiscal year. Non-SBC-funded proposers putting forward projects of significant statewide benefit should still provide the full proposed budget for all phases.

Phase 2

- By the end of Phase 2, the goal for each project, should be, at a minimum, to provide a demonstration with benefits quantified, based on real-world data acquired in the project period with independent review. For product development, the end-goal must be commercialization; for more mature approaches, this may include evidence for market uptake, adoption, replicability at scale. All Demonstrations must take place (1) within New York State, and (2) at a site that pays into the Clean Energy Fund (<https://www.nyserda.ny.gov/About/Funding>) through the electric System Benefits Charge (SBC), unless significant statewide benefits are demonstrated.
- After Phase 1, proposers must meet minimum cost share requirements based on technological and/or product maturity, summarized in the table below (20% for feasibility, 50% development, 40% demonstration). All proposers should include a plan to achieve this level of cost share. The commitments regarding how the cost share is achieved can be refined as part of the work performed during phase 1.
- A payment based on the final deliverable will be reserved until project completion. If awarded, NYSERDA may choose to negotiate the amount of such payment. If the project is a multi-stage project, a report should be delivered following the completion of each stage.

Cost share requirements based on technological and/or product maturity

- Technology and/or product development and demonstration projects may begin at a feasibility stage, product development stage, or demonstration stage. The TRL/CRL⁸ calculator (Attachment D) can be used to determine the stage, which must be entered into the Proposal Narrative to indicate level of maturity.
- The feasibility stage would typically involve applied research aimed at early development of a new product or technology, policy, business, and/or regulatory model.

Technology Stages	TRL	Proposer Cost Share
Feasibility	1-3	20%
Development	4-7	50%
Demonstration	8-9	40%

Cost Sharing Definition and Guidance - The proposal should show non-NYSERDA funding that meets the minimum requirement of the total project cost for Phase 2. Cost sharing can be from the proposer, other team members, and other government or private sources. Contributions of direct labor (for which the laborer is paid as an employee) and purchased materials may be considered "cash" contributions. Unpaid labor, indirect labor, or other general overhead may be considered "in-kind" contributions. NYSERDA will not pay for efforts which have already been undertaken. The proposer or proposing team cannot claim as cost-share any expenses that have already been incurred. Preference will be given to proposers that provide attractive leverage (cash co-funding, partnerships) opportunities for NYSERDA, and proposers that have a strong path to commercialization (see Section V – Proposal Evaluation Criteria). The phase 1 period can be used to refine the sources of cost share contributions beyond phase 1, as some forms of cost are contingent on other factors, such as performance in phase 1 from a co-funding organization.

⁸ Technology Readiness Level/Commercial Readiness Level.

Other conditions

- i. NYSERDA anticipates issuing a contract with a maximum, “not-to-exceed” amount with subsequent phases only being awarded on a contingent basis as described below.
- ii. NYSERDA reserves the right not to move forward with subsequent phases , dependent on project success and availability of funding.
- iii. At each Go/No-Go milestone, project outcomes will be evaluated to determine if the project will continue to be funded.
- iv. NYSERDA will not fund efforts that have already been undertaken. The proposing team cannot claim as cost-share any expenses that have already been incurred

IV. PROPOSAL REQUIREMENTS

To submit a Proposal:

1. Complete the Proposal Narrative (Attachment A), including all attachments referenced therein (identify Challenge Area on page 1), consisting of:
 - a. Proposal Narrative (Attachment A)
 - b. Project Summary Slide (Attachment A0)
 - c. Budget Form (Attachment B)
 - d. Statement of Work (Attachment C)
 - e. Any additional attachments appropriate to your project:
 - i. TRL/CRL Calculator (Attachment D) for Technology projects
 - ii. Letters of Support
 - iii. Host Site Agreement(s)
 - iv. Resumes
 - v. References
2. Notes for Completing Budget (Attachment B) and Statement of Work (Attachment C)
 - a. **All proposals must articulate a plan to go from the current stage through Demonstration with benefits quantified, and include tasks, budget, and schedule for all phases to be eligible.**
 - b. The Budget and Statemet of Work should be broken down by phase 1 and phase 2 with separate tasks, schedule, milestones, budget and cost share. Appropriate Go/No-Go milestones should also be outlined within Phase 2, as stages that increase the maturity of the approach. These stages can be denoted as Phase 2.X, for example.
 - c. For additional guidance, please refer to instructions in the Proposal Narrative (Attachment A), Budget Form (Attachment B), Statement of Work (Attachment C), adhering to the caps on budget and period of performance (Section III), and proposal requirements specific to the Challenge Area selected (Section II and Attachments referenced therein).
 - d. NYSERDA reserves the right to modify a project’s Statement of Work and may offer to fund part of the proposal or stage therein at a level lower than requested.
3. Submit per instructions on pages 1-2 of this document

Proposers must carefully review the Proposal Narrative to ensure that all required sections are completed. Failure to do so may result in the proposal being rejected as non-responsive.

Note: The proposer's goal should be to concisely present the information needed to fully address the scoring criteria (Section V). Proposals that grossly exceed the word limits or fail to follow the format guidelines may be rejected as non-responsive. Proposals deemed non-responsive will not be eligible for awards. If you believe proprietary information must be submitted to provide an adequate proposal, you must comply with the Section VI instructions for submitting proprietary material. Unnecessary attachments beyond those sufficient to present a complete, comprehensive, and effective proposal may be excluded from review.

V. PROPOSAL EVALUATION CRITERIA

Proposals will be reviewed by a Scoring Committee and will be scored and ranked according to the following criteria and relevance to chosen Challenge Areas described in Section II. Proposers receiving favorable evaluations will be invited to enter into contract negotiations with NYSERDA. After initial review of the Proposal, the Proposer, at NYSERDA's sole discretion, may be asked to address specific questions or provide additional information, either in writing or through an interview, as part of the Proposal scoring process. The Proposer will be required to address NYSERDA feedback on its detailed Statement of Work, Budget, and Schedule, and may also be asked to address specific recommendations of the Scoring Committee, before contract award.

Proposal Scoring Criteria in order of importance:

Proposed Solution/Scope–

- How well does proposed project specifically address the problem or opportunity identified in the challenge area?
- To what extent is the proposed work feasible, innovative, and superior to alternatives, demonstrating an understanding of the current state of the art and alternative solutions?
- Does the proposed solution have a high potential for commercialization and/or scalability?
- Are proposed tasks in the statement of work consistent with goals and contain appropriate Go/No-Go milestones?
- How well does the proposed solution address needs of low-income or historically [Disadvantaged Communities \(DACs\)](https://www.nyserda.ny.gov/ny/disadvantaged-communities)⁹?

Project Benefits –

- How significant are the potential reductions in GHG emissions resulting from the project?
- Will a significant part of the project take place in New York State?
- Is a successful project likely to provide direct benefits to low-income or historically disadvantaged communities?
- How significant are other benefits to New York State, such as increased resilience, environmental benefits, economic activity, or job creation?

Market Potential

⁹ <https://www.nyserda.ny.gov/ny/disadvantaged-communities>

- How well does the proposed project address a current challenge or opportunity that is not being addressed by others? Is the implementation or commercialization strategy well-conceived and appropriate for the level of maturity/ stage(s) of development?
- Is there potential for wide scale replication?
- Has the proposer demonstrated support from market actors and customers?
- Is there a process to measure progress and success?

Proposer Team and Support –

- Has the proposer provided evidence of being qualified to perform the proposed work based on the qualifications of the organization(s) and the involved individual(s)?
- Has the proposer provided evidence of good past performance on other relevant projects?
- Are the team members' roles and responsibilities defined and reasonable?
- Have letters of support that show the needed collaboration been provided?

Project Value –

- Is the overall project cost justified based on the expected benefits? Relative to the project cost, how significant is the potential market or deployment opportunity?
- How appropriate are the proposer's co-funding contributions (sources and amounts) in view of the proposer's overall financial resources, degree of risk exposure, and potential to benefit from the work? Does the proposer have a reasonable plan for pursuing additional funding (if needed) for commercialization and/or replicability?

Other Considerations

Program Policy Factors –NYSERDA reserves the right to accept or reject proposals based on the following Program Policy Factors:

New York State Energy Mission Alignment

- The degree to which the proposed project will advance the goals of the Clean Energy Fund and the goals of the Regional Greenhouse Gas Initiative (RGGI).
 - The Clean Energy Fund: <https://www.nyserda.ny.gov/About/Funding/Clean-Energy-Fund>
 - The 2022 RGGI Operating Plan: <https://www.nyserda.ny.gov/Researchers-and-Policymakers/Regional-Greenhouse-Gas-Initiative/Useful-Documents>
 - Project continues to contribute to one or more of NYSERDA's key statutory goals. <https://www.nyserda.ny.gov/About>

Program Portfolio Value and Optimization

- The degree to which NYSERDA ongoing funding, (incl. cost shares), will make a difference in the technology impact, acceleration of transformational advances and project success.
- The degree of overlap with other state and federal programs.
- The past performance of the proposer on other technical and business endeavors, including NYSERDA and DOE, ARPA-E, USDA, NSF and other funding organizations (if the performance history is available).
- The degree of NYSERDA portfolio balance/optimization. The project(s) balance(s) and enhances the NYSERDA portfolio in one or more of the following areas:
 - Technological diversity
 - Organizational diversity
 - Geographic diversity

- Technical or commercialization risk
- Stage of technology development
- Complimentary efforts to balance risk.

Project Diversity, Leverage and Collaboration

- The consideration of the impact on, and benefits to, a diversity of communities/locations, including low-income and rural communities, partnerships with minority serving and/or owned businesses.
- The degree of ongoing leverage; attracting other funding sources: building on the NYS capabilities: linking technologies and/or companies.

VI. GENERAL CONDITIONS

Proprietary Information - Careful consideration should be given before confidential information is submitted to NYSERDA as part of your proposal. Review should include whether it is critical for evaluating a proposal, and whether general, non-confidential information, may be adequate for review purposes. The NYS Freedom of Information Law, Public Officers law, Article 6, provides for public access to information NYSERDA possesses. Public Officers Law, Section 87(2)(d) provides for exceptions to disclosure for records or portions thereof that "are trade secrets or are submitted to an agency by a commercial enterprise or derived from information obtained from a commercial enterprise and which if disclosed would cause substantial injury to the competitive position of the subject enterprise." Information submitted to NYSERDA that the proposer wishes to have treated as proprietary, and confidential trade secret information, should be identified and labeled "Confidential" or "Proprietary" on each page at the time of disclosure. This information should include a written request to except it from disclosure, including a written statement of the reasons why the information should be excepted. See Public Officers Law, Section 89(5) and the procedures set forth in 21 NYCRR Part 501 <https://www.nyserda.ny.gov/About-/media/Files/About/Contact/NYSERDA-Regulations.ashx>. However, NYSERDA cannot guarantee the confidentiality of any information submitted.

Omnibus Procurement Act of 1992 - It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority- and women-owned business enterprises, as bidders, subcontractors, and suppliers on its procurement Agreements.

Information on the availability of New York subcontractors and suppliers is available from:

Empire State Development
Division for Small Business
625 Broadway
Albany, NY 12207

A directory of certified minority- and women-owned business enterprises is available from:

Empire State Development
Minority and Women's Business Development Division
625 Broadway
Albany, NY 12207

State Finance Law sections 139-j and 139-k - NYSERDA is required to comply with State Finance Law sections 139-j and 139-k. These provisions contain procurement lobbying requirements which can be found at <https://online.ogs.ny.gov/legal/lobbyinglawfaq/default.aspx> . Proposers are required to answer questions during proposal submission, which will include making required certification under the State Finance Law and to disclose any Prior Findings of Non-Responsibility (this includes a disclosure statement regarding whether the proposer has been found non-responsible under section 139-j of the State Finance Law within the previous four years).

Tax Law Section 5-a - NYSERDA is required to comply with the provisions of Tax Law Section 5-a, which requires a prospective contractor, prior to entering an agreement with NYSERDA having a value in excess of \$100,000, to certify to the Department of Taxation and Finance (the "Department") whether the contractor, its affiliates, its subcontractors and the affiliates of its subcontractors have registered with the Department to collect New York State and local sales and compensating use taxes. The Department has created a form to allow a prospective contractor to readily make such certification. See, ST-220-TD (available at http://www.tax.ny.gov/pdf/current_forms/st/st220td_fill_in.pdf). Prior to contracting with NYSERDA, the prospective contractor must also certify to NYSERDA whether it has filed such certification with the Department. The Department has created a second form that must be completed by a prospective contractor prior to contacting and filed with NYSERDA. See, ST-220-CA (available at http://www.tax.ny.gov/pdf/current_forms/st/st220ca_fill_in.pdf). The Department has developed guidance for contractors which is available at <http://www.tax.ny.gov/publications/sales/pub223.pdf>

Contract Award - NYSERDA anticipates making multiple awards under this solicitation. NYSERDA anticipates a contract duration of up to three (3) years, unless NYSERDA management determines a different structure is more efficient based upon proposals received. A contract may be awarded based on initial applications without discussion, or following limited discussion or negotiations pertaining to the Statement of Work. Each proposal should be submitted using the most favorable cost and technical terms. NYSERDA may request additional data or material to support applications. NYSERDA will use the Sample Agreement (Attachment E) to contract successful proposals. NYSERDA may at its discretion elect to extend and/or add funds to any project funded through this solicitation. NYSERDA reserves the right to limit any negotiations to exceptions to standard terms and conditions in the Sample Agreement to those specifically identified in the checklist questions. Proposers should keep in mind that acceptance of all standard terms and conditions will generally result in a more expedited contracting process. NYSERDA expects to notify proposers in approximately six (6) weeks from the proposal due date whether your proposal has been selected to receive an award. Upon receipt of this notification, a proposer can request to schedule a debrief on the selection process and the strengths and weaknesses of its proposal by contacting Ziggy Majumdar at (518) 862-1090 ext. 3439 or by e-mail at NatCarbon@nyserda.ny.gov. NYSERDA may decline to contract with awardees that are delinquent with respect to any obligation under any previous or active NYSERDA agreement.

Recoupment - For any new product research and/or development, NYSERDA will generally require a royalty based on sales of the new product developed. NYSERDA's standard royalty terms are 1% of sales/ten percent (10%) of all license revenue accruing to the Contractor for products produced (for a period of fifteen years or until the Contractor pays NYSERDA an amount equal to the amount of funds paid by NYSERDA to the Contractor, whichever comes first).

Annual Metrics Reports – If awarded, the proposer will be required to submit to NYSERDA's Project Manager on an annual basis, a prepared analysis and summary of metrics addressing the anticipated energy, environmental and economic benefits that are realized by the project. All estimates shall reference credible sources and estimating procedures, and all assumptions shall be documented. Reporting shall commence the first calendar year after the contract is executed. Reports shall be submitted by January 31st for the previous calendar years' activities (i.e., reporting period). NYSERDA may decline to contract with awardees that are delinquent with respect to metrics reporting for any previous or active NYSERDA agreement.

Accessibility Requirements - NYSERDA requires contractors producing content intended to be posted to the Web to adhere to New York State's Accessibility Policy. This includes, but is not limited to, deliverables such as: documents (PDF, Microsoft Word, Microsoft Excel, etc.), audio (.mp3, .wav, etc.), video (.mp4, .mpg, .avi, etc.), graphics (.jpg, .png, etc.), web pages (.html, .aspx, etc.), and other multimedia and streaming media content. For more information, see NYSERDA's Accessibility Requirements on the [Doing Business with NYSERDA page](#) or download [NYSERDA's Accessibility Requirements \[PDF\]](#).

Limitation - This solicitation does not commit NYSERDA to award a contract, pay any costs incurred in preparing a proposal, or to procure or contract for services or supplies. NYSERDA reserves the right to accept or reject any or all proposals received, to negotiate with all qualified sources, or to cancel in part or in its entirety the solicitation when it is in NYSERDA's best interest. NYSERDA reserves the right to reject proposals based on the nature and number of any exceptions taken to the standard terms and conditions of the Sample Agreement. NYSERDA reserves the right to disqualify proposers based upon the results of a background check into publicly available information and the presence of a material possibility of any reputational or legal risk in making of the award.

Disclosure Requirement - The proposer shall disclose any indictment for any alleged felony, or any conviction for a felony within the past five years, under the laws of the United States or any state or territory of the United States and shall describe circumstances for each. When a proposer is an association, partnership, corporation, or other organization, this disclosure requirement includes the organization and its officers, partners, and directors or members of any similarly governing body. If an indictment or conviction should come to the attention of NYSERDA after the award of a contract, NYSERDA may exercise its stop-work right pending further investigation or terminate the agreement; the contractor may be subject to penalties for violation of any law which may apply in the particular circumstances. Proposers must also disclose if they have ever been debarred or suspended by any agency of the U.S. Government or the New York State Department of Labor.

Vendor Assurance of No Conflict of Interest or Detrimental Effect - The proposer shall disclose any existing or contemplated relationship with any other person or entity, including any known relationships with any member, shareholders of 5% or more, parent, subsidiary, or affiliated firm, which would constitute an actual or potential conflict of interest or appearance of impropriety, relating to other clients/customers of the proposer or former officers and employees of NYSERDA, in connection with proposer's rendering services as proposed. If a conflict does or might exist, please describe how your company would eliminate or prevent it. Indicate what procedures will be followed to detect, notify NYSERDA of, and resolve any such conflicts.

The proposer must disclose whether it, or any of its members, or, to the best of its knowledge, shareholders of 5% or more, parents, affiliates, or subsidiaries, have been the subject of any investigation or disciplinary action by the New York State Commission on Public Integrity or its

predecessor State entities (collectively, "Commission"), and if so, a brief description must be included indicating how any matter before the Commission was resolved or whether it remains unresolved.

Public Officers Law – For any resulting awards, the Contractor and its subcontractors shall not engage any person who is, or has been at any time, in the employ of the State to perform services in violation of the provisions of the New York Public Officers Law, other laws applicable to the service of State employees, and the rules, regulations, opinions, guidelines or policies promulgated or issued by the New York State Commission on Ethics and Lobbying in Government, or its predecessors (collectively, the "Ethics Requirements"). Proposers are reminded of the following Public Officers Law provision: contractors, consultants, vendors, and subcontractors may hire former NYSERDA employees. However, as a general rule and in accordance with New York Public Officers Law, former employees of NYSERDA may neither appear nor practice before NYSERDA, nor receive compensation for services rendered on a matter before NYSERDA, for a period of two years following their separation from NYSERDA service. In addition, former NYSERDA employees are subject to a "lifetime bar" from appearing before any state agency or authority or receiving compensation for services regarding any transaction in which they personally participated, or which was under their active consideration during their tenure with NYSERDA.

Any awardee will be required to certify that all of its employees, as well as employees of any subcontractor, whose subcontract is valued at \$100,000 or more who are former employees of the State and who are assigned to perform services under the resulting contract, shall be assigned in accordance with all Ethics Requirements. During the term of any agreement, no person who is employed by the contractor or its subcontractors and who is disqualified from providing services under the contract pursuant to any Ethics Requirements may share in any net revenues of the contractor or its subcontractors derived from the contract. NYSERDA may request that contractors provide it with whatever information the State deems appropriate about each such person's engagement, work cooperatively with the State to solicit advice from the New York State Commission on Ethics and Lobbying in Government, and, if deemed appropriate by the State, instruct any such person to seek the opinion of the New York State Commission on Ethics and Lobbying in Government. NYSERDA shall have the right to withdraw or withhold approval of any subcontractor if utilizing such subcontractor for any work performed would be in conflict with any of the Ethics Requirements. NYSERDA shall have the right to terminate any contract at any time if any work performed is in conflict with any of the Ethics Requirements.

Due Diligence – NYSERDA, at its discretion, may conduct broad due diligence to validate any or all elements of an application and to assess applicants' prospects of success, including gathering information to assess a proposal relative to any of the topics listed in evaluation criteria, whether or not such topic is explicitly addressed in a proposal. NYSERDA may conduct due diligence on some or all proposals based on NYSERDA's current guidelines at the time of a review. NYSERDA staff may follow up with proposers to request additional information or clarification regarding applicant's proposal, including questions regarding applicant's business prospects and resources, whether or not those questions are specifically related to the elements of the proposal. Additionally, customized due diligence may be conducted by internal or external staff or contractors based on questions on any proposal raised by NYSERDA staff and/or the Scoring Committee. Due diligence may include (but is not limited to): interviews of independent references and background checks of team members; assessment of prior business experience of any team member associated with a proposal; research on intellectual property claims; customer and partner reference checks; market research on the applicants' target market and any other related or possibly competitive technology or market area; research to validate any assumptions on

current or future revenues, costs, capital needs, and financing prospects for proposers' business, including similar (or unrelated) technologies, processes, or competitive solutions; or any other research that could reasonably inform the evaluation of a proposal, or the prospects for commercial success of the proposers' business (whether directly related to, or unrelated to the specific elements in a proposal). Due diligence may include discussions with proposers' former and current business partners, employees, investors, customers, and competitors. Due diligence may be conducted by NYSERDA personnel or contractors including members of the scoring committee, before, during, or after a scoring process, and prior to finalization of a contract award, any information gleaned in diligence may be used to score or re-score a proposal or apply a program policy factor.

EO 16 Protocols – Pursuant to Executive Order No. 16 issued on March 17, 2022, all vendors responding to bids or contracting with New York State must certify, using the form provided as part of this solicitation, their status with regard to conducting business operations in Russia, and that any such business operations in Russia conducted on behalf of the vendor are determined to be permitted under any of the allowable exemptions. The term vendor is intended to encompass bidders prior to contract award, contractors who have received a contract award, contract assignees, or contractors for whom an extension to an existing contract is being pursued. Exemption decisions are in NYSERDA's sole discretion and are final decisions. NYSERDA reserves the right to solicit additional materials or information regarding the responses or materials provided by a vendor.

Pursuant to Executive Order No. 16, all vendors will be vetted to ensure that they are not on the federal sanctions list at <https://sanctionsearch.ofac.treas.gov/>. There is no waiver or exemption process for vendors appearing on the federal sanctions list.

The Executive Order remains in effect while sanctions imposed by the federal government are in effect. Accordingly, vendors who may be excluded from award because of current business operations in Russia are nevertheless encouraged to respond to solicitations to preserve their contracting opportunities in case sanctions are lifted during a solicitation, or after award in the case of some solicitations.

VII. SUMMARY OF ATTACHMENTS

- Attachment A – Proposal Narrative Template
 - Attachment A0 – Project Summary Slide
- Challenge Area Specific Proposal Guidelines
 - Attachment A1 – Buildings Challenge
 - Attachment A2 – Enabling Challenge
 - Attachment A3 – MMRV Challenge
- Attachment B – Budget Form & Instructions
- Attachment C – Statement of Work Template
- Attachment D – TRL-CRL Calculator Workbook
- Attachment E – Sample Agreement